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Okey H. Costill - March 21st 1821

Inaugural Dissertation
on
Chlorosis -

Okey H. Costill

admitted March 21st. 1821

To the

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To the Professors of the University of Pennsylvania

Gentlemen.

In presenting to you my thesis, it would perhaps be superfluous, to declare that I am not actuated, by a desire of obtruding myself thus upon you, nor by the expectation, that what I write, can either give reputation to its author, or tend to the advancement of science. However desirable, those objects may be, and however fondly I may anticipate that period, when the labors of succeeding years, may rank me among the children of science, the present humble state of my acquirements, admonishes me, that the event is far distant, and can only be brought about, by an assiduous and long continued application, to those studies which may truly be said, to have just commenced.

It is in compliance, with your regulations, that I now offer to you a thesis. To apologize for

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trusting, that it will not be considered, the off-
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comply with your requisitions - that while the
other eye of wisdom, dwells with minuteness, upon
pages sketched by an unpractised hand, it will
view with indulgence, those faults, which it can-
not fail to detect, and that the same benevolent
feelings, which have so often been evinced, will
again be exerted, in an approaching hour of anxiety,
in which as has lately been eloquently observed,
"All our hopes and our fears ^{our} joys and our
sorrows are crowded into a narrow compas-

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Chlorosis -

The term Chlorosis, is employed in rather an indefinite sense, and is sometimes used to designate a certain state of debility, which occurs to married women, after delivery or abortion. By the term Chlorosis, I would here be understood to characterize, those symptoms which occur about the age of puberty, connected with a retention of the menses, at that period of life, at which they usually make their first appearance. These symptoms are heaviness, listlessness, and aversion, to motion, fatigue on the least exertion, palpitation at the heart, pain in the loins and hips, flatulency, acidity and costiveness, premature loss of appetite for lime, chalk, and other absorbents, with many other dyspeptic symptoms. As the disease advances, the face becomes pale, and afterwards assumes a yellowish colour, verging on a green from whence the term green sickness. The lips lose

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their color, the eyes are encircled with a livid
areola, the whole body, has a leuco-phlegmatic
appearance, with every indication of want of
energy, in the system. The feet are affected with
oedematous swellings, the breathing is much hurried
by any vigorous exertion, the pulse is quick, but
small, the heat becomes faded, and the patient
is not infrequently, affected with symptoms of
hysteria - Sometimes, a great quantity of urine
is voided in the morning, and hectic fever occasion-
ally attends -

Much difference of opinion, has existed as to the
cause of the disease - As it makes its appear-
ance about the age of puberty, and is very con-
stantly connected, with a retention of the menses
or *fluor*, it was at one time supposed, that
this retention, was the immediate cause - This
opinion, was however opposed by succeeding phy-
sicians, and it was contended by Cullen, and
others, that the retention of the menses, was a

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consequence, and not a cause of the disease, -
I shall give Bullen's theory in his own words -

These symptoms (viz those above enumerated) when occurring in a high degree, constitute the Chloasma of authors, hardly ever appearing separately from a retention of the menses, and attending to these symptoms, the cause of this retention, may I think be perceived. These symptoms, manifestly shew a considerable laxity, and flaccidity of the system, and therefore give reason to conclude, that the disturbance of the menses, accompanying them is owing to a weaker action, of the vessels of the uterus, which therefore do not propel the blood into the extremities, with a force sufficient to open them, and to pour out blood from them. Now it happens, that at a certain period of life, a state of flaccidity of the system, arises in young women not generally affected with such weakness, and at which but a little before, they had given no indication, may be difficult to explain. But

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I would attempt it in this way. As a certain
state of the ovaria in females, disposes them to
menstruation, about the period when the menses first
appear, it is to be presumed that the state of the
ovaria, and that of the uterine vessels, are in some
connection, and as generally, symptoms of
the former in the state of the former, appear be-
fore those of the latter, it may be inferred that
the state of the ovaria, has a great share, in ex-
ercising the action of the uterine vessels, and in
producing the menstrual discharge. But analo-
gous to what happens in the male sex, it may
be presumed, that in females a certain state of the
arterials, is necessary to give tone, and tension, to
the whole system, and therefore, that if the stim-
ulus arising from the genitals, be wanting the whole
system, must necessarily fall into a flaccid or
torpid state, and thence the chlorosis, or retention
of the menses may arise.

It appears to me therefore, that the retention of

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the menses, may be referred to a certain state, or affection of the ovaria, but what is precisely the nature of this affection, of the ovaria or what are the causes of it, I will not pretend to explain, nor can I explain, in what manner, that primary cause of retention may be removed."

This is the opinion of Cullen, and from this it may be perceived, that he considers the disease as originating in a flaccidity, and laxity of the system, and that the retention of the menses, is a symptomatic affection. The difficulty, which he acknowledges, of accounting for a state of debility, occurring spontaneously, at this period where no previous indication is given, renders his theory exceptionable, and the propriety of making debility a primary cause of disease, is certainly questionable, in as much as debility is more generally the consequence, than the cause of disease.

Hamilton, who has combated the opinion of Cullen, with some ingenuity alleges costiveness as

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the cause of the disease, and accordingly recommends
purgatives, as a principal remedy. While we ac-
knowledge that costiveness, is invariably found among
the symptoms of the disease, and that the removal
of this symptom, is indispensable to its cure, it would
perhaps be going too far to admit, upon his authority
alone that costiveness, is a primary cause of the
disease, especially when we consider, the strong attack
which he unites, to purgative medicines, and
to long train of disease, he locates in the elementary
canals.

Amidst the controversies on this subject, some
have imputed the origin of chlorosis, to unusual desire. This
opinion, bears absurdity upon its face, for how can
universal appetite possibly exist, when the organs
upon which it depends, are not yet developed.
The sentiment should be at once rejected - as admitting
physical influence, over moral refinement, most humiliating
and supposing incapacity of mind at a period of life in
which (more perhaps than in any other,) affliction may

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console itself, with a consciousness of innocence.

To enter minutely, into the subject of men-
struation, to discuss the merits, of the various theories,
which have at different periods been adopted, is
unnecessary, for this mysterious operation of nature is a
subject for which, I have neither inclination, nor ability.
Yet it is not improbable, that an attentive consid-
eration of the facts relative to menstruation, would lead
to a conclusion, very different from the one generally
admitted, viz. that it is a symptomatic affection.
It is now generally agreed, that the menstrual discharge
is not pure blood, but that it is the result of a se-
cretory office of the uterus, and it is supposed to keep
the uterus, in a state fit for conception. - The in-
convenience, and many painful symptoms, induced by
a suppression of this evacuation, after it has been once
established, come under our daily observation, and why may
we not infer, with equal propriety, that a retention of
it at the time, when nature makes an effort to estab-
lish it, the discharge, may be productive of at least equal

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management. The retention of the menses, and
subsequent chlorosis, may I think be attributed
to the want of secretory of the uterus, which owing to
some irregularity, has been rendered incapable, of
even so that action, at the time when the general
system, requires such evacuation. It may be
inquired, how it is that the uterus, does not arrive
at a state capable of executing its functions, when
the general system, requires its operation? To this
I can only answer, that the many irregularities
of life, the force of education, & peculiarities of situation
are in many instances, calculated to thwart the salu-
tary operations of nature, and destroy the harmony
of her works.

There appears to be a determinate
period, in the existence of every production of nature
at which her work is completed, when the slow,
but undeviating operations which she has resorted
to its growth, nutrition, &c. &c. in its development
of its powers, have brought it to a state of physical
perfection, and rendered it capable, of fulfilling all the

[illegible]

imposes, for which it was designed. These opera-
tions, are however liable to frequent interruption,
from the necessities, and irregularities, incident to
life, and in no instance perhaps more so, than
in the human species.

Now, however, more particularly to the
female, on account of the various purposes, for which
she was designed, the consequent multiplicity of organs
in her formation, and the various, & sensible, virtues,
which she is endowed.

The hand of nature,
lingers long on a production, in which she blends,
so many perfections, in which she unites charms
that are irresistible, with offices that are indispensa-
ble, and which she awards to woman, than phre-
nic, and intellectual beauties, which seem to her the
admiration of her species, she composes or

task, of rendering, that species, perpetual. When
we consider, how complicated the structure must
necessarily be, of a being destined to the fulfilment
of offices so various, and important, and the

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intimate connection, which exists between every part, it is not a matter of surprise, that the interruption of one of those functions, should be attended, with a considerable disarrangement of the whole system, and thereby produce disease.

This opinion, derives some support from an examination of the symptoms, that occur in Chlorosis, all of which, in the commencement evince local determination. The hysterical symptoms, which sometimes occur may be imputed, to a determination of blood, to the uterus, of which it is incapable of relieving itself by secretion, though this incapacity for secretion, may not arise from actual debility, but from rigidity or some cause, very foreign to debility.

The palpitation of the heart, and disordered respiration, may arise from a superabundant quantity of circulating fluids, and a consequent oppression of the heart, and lungs; and a determination of blood to these parts, may account for the pulmonary consumption.

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tions, which are often a consequence of chlorosis.

The pains in the back, and hips and the occasional increase of urine, all denote the struggle of nature, to relieve herself of a burden, arising from an undue quantity of fluids; and when this attempt is completely unsuccessful, the strength of the system, sinks and a state of great laxity, or acidity occurs.

To say that the retention of the menses, is in a symptomatic disease, now I am persuaded, be going much too far. But that it may often does so, without any previous disease of debility, and that Chlorosis follows, as a consequence in the manner above stated, the foregoing considerations induce me to believe.

In whatever manner, Chlorosis may be produced, it is certainly attended, in its confirmed state, with much feebleness, and emaciation - and the treatment is to be conducted, upon the plan of invigorating the system, and at the same time removing the

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Hamilton commences the treatment of the disease, by evacuating pretty copiously, the alimentary canal. This is no doubt rendered necessary, by the constipation, and consequent mælic accumulation, which attends the complaint. After this is accomplished, the tonic plan of treatment, is to be resorted to.

The diet, should be generous, a moderate quantity of wine, should be allowed, and the patient, should take gentle exercise on horseback. The Cinchona, the Gentian, and Chalybeate preparations, should be employed.

It is remarked by Dr Thomas, that Chlorosis is a disease, at all times much relieved by steel, and that it will bear it, even when there is a considerable degree of fever. On this account he recommends the Bath waters, and enters into a description, of the Chalybeate waters of Europe, which it would be out of place to treat of here. Perhaps however the cure performed, in this way may be in a great

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The next indication, is that
of exciting the uterus to action, and thereby pro-
moting the menstrual discharge. This may be
often accomplished, by exercise such as walking,
or dancing - by frictions, electricity, or by putting the
feet frequently into warm water; or by heat
applied to the parts of generation, and the abdomen.

If these should prove unsuccessful, there are cer-
tain stimulating cathartics, which may be employ-
ed, with much advantage. Of these the best per-
haps is Aloe, either alone, or in combination with
Calomel, a preparation, which I have employed suc-
cessfully, in pills composed of four grains of aloe,
to one grain of Calomel. As an emmenagogue
the Polygala Seneka is highly useful. It is a very
diffusible stimulant, and is recommended by Dr
Chapman, as extremely well suited, to bring about
the secretory action, of the uterus - It may be given
either in powder or decoction the latter is preferred. It may

be taken in such ^{small} stomach will bear.

D. Devers in the third number of the Medical Museum recommends the volatile tincture of gum guaiacum, in high doses.

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Pulv. gum. guaiac. ʒ VII.

Carbon. So2. ext. Potas ʒ II.

Pulv. Rins. ʒ I f

Alcohol. Dilut. tB 1

We direct a teaspoon full to be given three times a day in a glass of Madeira wine. The Hellebore is recommended as a useful pectoragogue. The dose is ʒ I of the Tincture.

During all this time particular attention should be paid to the mind of the patient. She should mingle frequently in society and be allowed all innocent amusement.